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## Digging and filling pits in the Mesolithic of England and Ireland

Blinkhorn, Edward ; Lawton -Matthews, Elizabeth; Warren, Graeme

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DIGGING IN THE MESOLITHIC

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29-30 MARS 2016

Textes publiés sous la direction de

Nathalie ACHARD-COROMPT,  
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SÉANCES DE LA SOCIÉTÉ PRÉHISTORIQUE FRANÇAISE

12

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*Digging in the Mesolithic*

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# Digging and Filling Pits in the Mesolithic of England and Ireland

## Comparative Perspectives on a Widespread Practice

Edward BLINKHORN, Elizabeth LAWTON-MATTHEWS and Graeme WARREN

**Abstract:** In recent years development-led excavations have transformed regional Mesolithic datasets across Britain and Ireland. Studies of the results of these projects have highlighted the frequency with which supposedly mundane features such as pits are encountered on Mesolithic sites. Whilst pits have long been recognised on individual sites, it is only from analyses of large datasets that it has become possible to identify the ways in which pits and features in general can contribute valuable spatial, artefactual and geoarchaeological/palaeoenvironmental information to develop our understanding of life in the Mesolithic. This also facilitates comparison with the Neolithic of both regions, where a rich tradition of pit digging has been well documented archaeologically. Recent reviews of the evidence for pit digging, and the material recovered from pits, in England and Ireland have highlighted the prevalence of these features across a wide range of Mesolithic sites, as well as a diversity of interpretations of their uses. At the same time obstacles preventing complete analysis are presented by a lack of sampling and poor recording.

In this paper the authors compare the results of two systematic reviews of Mesolithic pits from England and Ireland, comparing and contrasting these to evidence from Scotland and Wales as appropriate. Both reviews uncovered extensive evidence for the presence of pits at sites of diverse purpose, and in varied landscape settings. The evidence from pit-fills points to various uses including site clearance and refuse disposal, deposition and possible caching, and burial. The spatial evidence indicates some interesting trends such as reuse and recutting as well as the presence of pit alignments. While there were similarities between the uses of pits in Ireland and England, some differences in character were also noted. The comparative perspective offered by this paper emphasises both the diversity of practices involving pits, and the importance of developing suitable future approaches to Mesolithic features.

**Keywords :** Mesolithic, pits, alignments, British Isles, Ireland, United Kingdom, funerary practice, deposition, refuse.

### *Le creusement et comblement de fosses durant le Mésolithique en Angleterre et en Irlande : perspectives comparatives sur une pratique très répandue*

**Résumé :** Ces dernières années, le développement de l'archéologie préventive a transformé le corpus des données concernant le Mésolithique régional en Grande-Bretagne et en Irlande. Les études liées aux résultats de ces fouilles ont révélé l'occurrence fréquente de structures supposément banales comme des fosses sur les sites mésolithiques. Alors que ces fosses ont été décrites depuis longtemps sur des sites individuels, c'est seulement à partir des analyses de vastes ensembles de données qu'il est devenu possible de mettre en évidence la manière dont ces fosses – et d'autres aspects en général – pouvaient contribuer utilement à développer nos connaissances sur la vie au Néolithique à travers des informations spatiales, géo-archéologiques et paléo-environnementales ainsi que grâce aux artefacts. Ceci facilite aussi les comparaisons avec le Néolithique dans ces deux régions pour lesquelles le creusement de fosses a représenté une riche tradition abondamment documentée par l'archéologie. Le réexamen récent des évidences de creusements de fosses et du mobilier qu'on y a retrouvés, en Angleterre et en Irlande, a mis en évidence la prévalence de ces structures à travers un large éventail de sites mésolithiques, ainsi que la variété des interprétations proposées quant à leurs rôles. Dans le même temps, le manque d'échantillonnage et le piètre enregistrement des données constituent encore un obstacle à une analyse complète.

Dans cet article, les auteurs comparent les résultats de deux bilans systématiques des fosses mésolithiques en Angleterre et en Irlande, en les comparant et les contrastant de façon appropriée avec les données concernant l'Écosse et le pays de Galles. Chacun de ces bilans expose l'abondance de fosses retrouvées sur des sites à destination variée, et ce pour une variété de paysage. Le remplissage des fosses indique plusieurs utilisations possibles qui incluent le nettoyage du site, l'élimination des ordures, un rôle de dépôt et potentiellement

de cache, et l'inhumation. Les données spatiales révèlent des tendances intéressantes comme la réutilisation ou le recréusement ainsi que l'occurrence d'alignements des fosses. Même si il existe des similarités entre l'utilisation des fosses en Irlande et en Angleterre, des caractères différents ont aussi été relevés. Cet article présente une perspective comparative qui souligne à la fois la diversité des pratiques associées à ces fosses ainsi que l'importance qu'il y a de développer dans le futur des approches adaptées aux structures mésolithiques.

**Mots clés :** Mésolithique, fosses, alignements, Îles Britanniques, Irlande, Royaume-Uni, rites funéraires, dépôts, rejets.

**R**ECENT YEARS have seen a transformation in the character of archaeological work in Britain and Ireland. Fieldwork is dominated by commercial archaeological organisations, often working within a developer-led framework and conducting excavations on a scale beyond the capacity of any academic research institution. This has led to a substantial change in the nature of the data available to researchers interested in the Mesolithic period: broadly defined as beginning early in the Holocene and ending in the centuries surrounding 4000 cal. BC. Unfortunately, in both Britain and Ireland, a strongly market-driven model of archaeological intervention exists, and there is often less integration between Mesolithic researchers and commercial archaeological units than might exist in other parts of Europe. At the same time, regional variation in heritage management structures within the United Kingdom as well as between the United Kingdom and Ireland, mean that comparisons between regions are not straightforward. This comparative perspective is important, because they are frequently treated in isolation. Indeed differences in the lithic technologies used in Britain and Ireland have often been used to argue that the areas were different in character.

## DATA

**T**his paper reviews evidence for pits on Mesolithic sites in Britain and Ireland (fig. 1). It is primarily based on two recent syntheses, both carried out for different purposes, and using different methodologies. E. Blinkhorn's review (Blinkhorn, 2012) of the English data comprised the collation of all accessible developer-led reports relating to the Mesolithic and dating from 1990–2010 by consulting each local authority Historic Environment Record (HER) and commercial archaeological units, in addition to the conventionally published literature. Although pits were not an intentional focus of his project it rapidly became clear that, by the very nature of commercial archaeology in England, all cut features would play a central role due to their importance in signalling archaeological presence in a development-led environment where much excavation is conducted by machine. E. Lawton-Matthews' Master's thesis (Lawton-Matthews, 2012) reviewed evidence for Mesolithic pits in Ireland specifically, whilst also including other subsurface features. This was mainly due to the fact that many Irish (and English) reports often left doubt about the nature of the feature (e.g. small pit or a posthole, large irregular pit or possible tree-throw), but also because this allowed a comparison between the treatment of pits and other subsurface features. A quantitative approach to

the data was taken and a database built, comprising three analytical levels: site, pit and fill. The site level information concerned geographic location, activity evidence etc. The pit level information was mainly concerning the number, size and morphology of pits. Lastly, the fill level included information on soils and inclusions found in pits. The information from each level was cross referenced so that, for example, any connections between inclusions and geographic location could be explored. All published reports from the early twentieth century to 2008 were consulted as part of the study, as were online excavation summaries which allowed targeted approaches to commercial contractors. However, no systematic approach to consulting grey literature was taken, as in E. Blinkhorn's review. The circumstances of excavation seems to have an effect on the chances of identifying pits in both Ireland (see Lawton-Matthews and Warren, 2015, p. 143–144) and England, with more recent fieldwork, often developer-led, being more likely to have found pits. As discussed below, this is presumably a product of the scale and character of the fieldwork undertaken.

Both reviews asked slightly different questions of the primary data, and therefore we can only make qualitative comparisons here. Data from other regions of Britain, especially Scotland, is currently undergoing synthesis. This material is discussed anecdotally in this paper. Other recent discoveries, and sites that came to light after the completion of the Blinkhorn and Lawton-Matthews' projects are similarly discussed.

## PITS AND THE MESOLITHIC OF ENGLAND AND IRELAND

**P**rior to the reviews reported here, pits played a limited role in accounts of the Mesolithic. Woodman, for example, in his recent review of the Mesolithic in Ireland argues that "... the number of sites producing pits, post-holes or hearths of Mesolithic date are [*sic*] exceptionally uncommon" (Woodman, 2015, p. 9). Exceptional sites have caught people's attention and are discussed below—the Mesolithic cremation pits from Hermitage, Ireland the Stonehenge pit alignment in England, or the pit complex at Warren Field, Aberdeenshire, Scotland which is claimed to have functioned as a 'time-reckoner' (Gaffney *et al.*, 2013). However, because of their perceived 'specialness', these are often treated in isolation from the broader set of pit digging practices of which they form just one part. This is unfortunate, as pits are a significant feature of the archaeological record of Mesolithic sites in Britain and Ireland. Pits are such a common and widespread feature of archae-

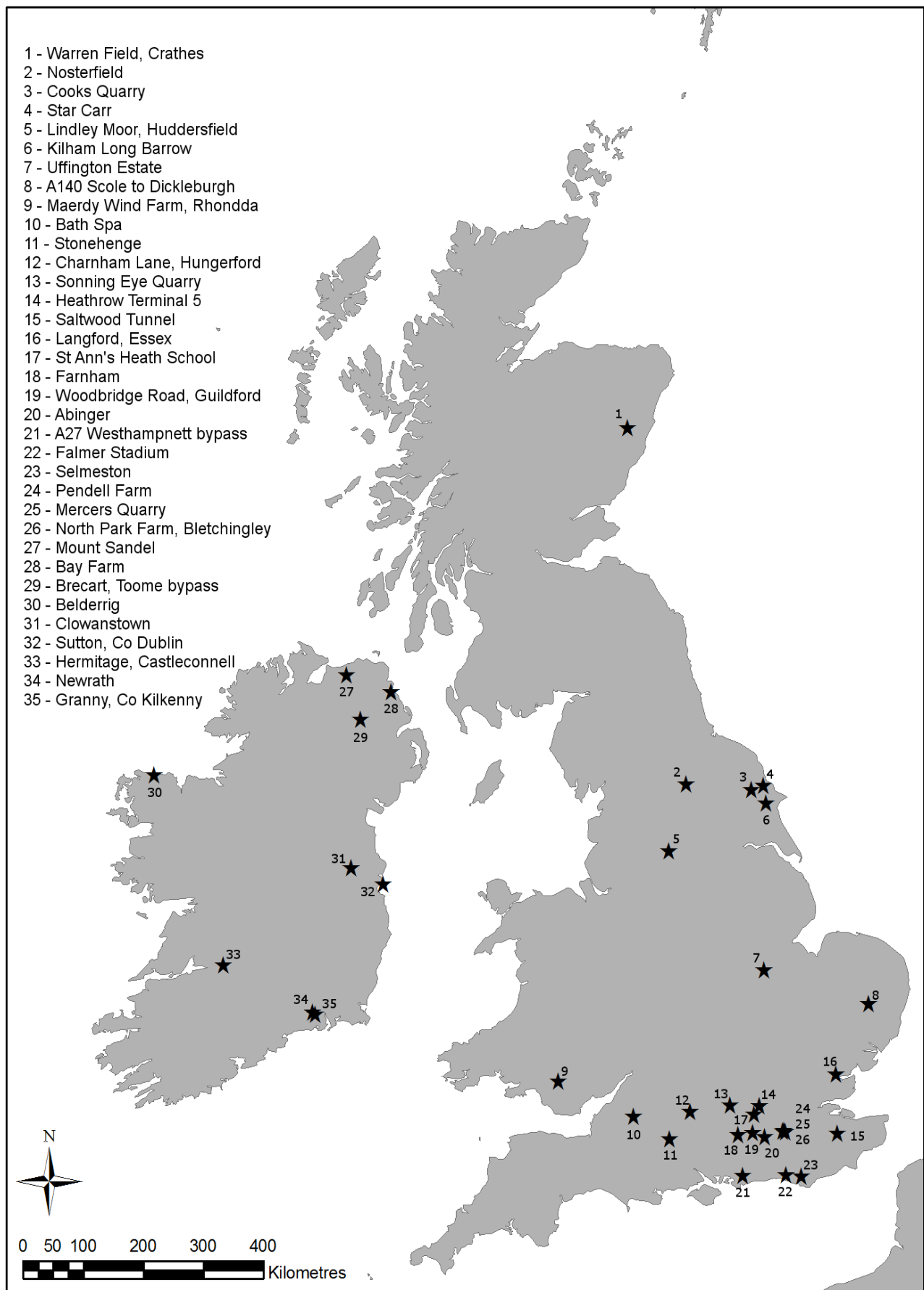


Fig. 1 – Map of the sites mentioned in the text.

Fig. 1 – Carte des sites mentionnés dans le texte.

ological sites in general that without an understanding of the possible forms, functions and meanings of Mesolithic examples a substantial corpus of evidence is left poorly assessed in developer-funded works, where the period must compete for resources with more substantial deposits.

The comparative lack of attention given to pits in Mesolithic research is especially problematic because reappraisals of pits in other periods of prehistory have produced important new understandings of past lives. In particular, recent years have seen reconsideration of the role of pits in Neolithic Britain and Ireland. In both regions key researchers (Anderson-Whymark and Thomas, 2012; Smyth, 2014) have argued that it is the expansion of developer-led archaeological research that has transformed the data available to researchers: as D. Garrow notes, "... the often very large areas its excavations expose, has simply revealed many, many more pits. As a result, it has become necessary to take them seriously." (Garrow, 2012, p. 217). Pits are now central to our understanding of Neolithic practices—as evidence of settlement, commitment to places, contexts for varied strategies of deposition etc. At times, specific methodological approaches have been used to understand pits, including programmes of refitting (Garrow *et al.*, 2005). This is not to argue that Mesolithic pits are the same as Neolithic ones, but the absence of comparable reviews of pits in the Mesolithic of Britain and Ireland unfortunately perpetuates the significant divide that exists between Mesolithic and Neolithic research traditions.

## FREQUENCY

In Ireland, pits considered likely or confidently to be Mesolithic (see Lawton-Matthews and Warren, 2015 for methodology) were identified on twenty-nine sites excavated by universities or the commercial sector. Recent commercial excavations are much more likely to have identified pits (Lawton-Matthews and Warren, 2015, p. 143–144). Over 25% of sites ( $n = 14$ ) have only one pit, such as at Clowanstown (Mossop and Mossop, 2009), others many. Total numbers of pits are significantly impacted by individual sites—with over 50% of pits coming from the (Irish) Early Mesolithic site of Mount Sandel—but 137 pits were considered likely, confidently or possibly Mesolithic. Although the samples are small, only six early Mesolithic sites had pits whereas the number of Later Mesolithic sites with pits numbered fourteen (four are sites with both Early and Later dates). No real significance can be given to this trend due to low numbers and overall site frequencies.

In England, E. Blinkhorn's data (Blinkhorn, 2012) shows sixty-six commercial interventions (of 1,280: c. 5%) to have identified pits, although many other examples were associated with or classified as structures or tree-throw pits. No overall total of pits is available, but the number is substantial, especially when non-commercial projects and recent discoveries are included. A number of these comprise interventions where a single pit has

been dated to the Mesolithic by inclusion of typologically Mesolithic flint with no evidence for later influence. Others, such as at Woodbridge Road (Bishop, 2008) and Heathrow have groups of many (11) in close proximity. No data is available for further refinement of chronologies of pits within the Mesolithic—few pits were radiocarbon-dated and usually only broad subdivisions were suggested, unless adequate assessment of the lithics had been undertaken. Although systematically collated data is not available from Scotland or Wales it is clear that pits are a significant feature of Mesolithic sites in the former.

## MORPHOLOGY

The sizes and shapes of Mesolithic pits as a whole are difficult to classify. A majority are irregular and, more importantly, given significant site truncation and post-depositional disturbance, there is only good information about the basal shape and fill. Furthermore, unlike later prehistoric features, those of the Mesolithic have been exposed to taphonomic effects, including pedogenesis, for many thousands of years longer.

The shapes of the pits vary, but in Ireland most appeared as irregular to the excavators. Unfortunately, in many instances little information was recorded about the pits: fifty-five pits (52% of the total number of securely dated pits) had no information on their profile and thirty-seven (35%) had no plan. Most are sub-circular or irregular in plan with bowl and dish profiles. Pits were varied in size: some were so small that there was little difference in size between pits and postholes, such as examples from Brecart at 0.10 m depth by 0.15 m diameter, and 0.10 m depth by 0.25 m diameter, labelled as a posthole and a pit respectively (Dunlop, 2010; here: fig. 2); others were as big as 1.60 m deep by 1.20 m diameter (Granny; see Gleeson and Breen, 2011). There are eleven pits over 1.50 m in diameter and eleven pits had a depth of 0.50 m or more. There are some exceptional pits, or possible tree throws, such as the example from Newrath, which is 4.00 m in diameter (Wilkins *et al.*, 2009). No systematic information is available from the English data, but the Irish evidence fits the range found in England.

Information on the re-cutting and re-filling of pits is rather limited but there is some evidence at sites such as Mount Sandel. Here pits are regularly recut, but interestingly the recutting often seems to respect the boundaries of the original, wider, pits. This can be seen in both plan and profile (Woodman, 1985, p. 16–20). Another possible example of recutting in Ireland was found at Bay Farm (Anderson *et al.*, 1996, p. 154, fig. 11). Unfortunately discussion of differences or similarities in primary and secondary fills was not common. Recuts of a number of the pits at Warren Field, Scotland (Murray *et al.*, 2009; Gaffney *et al.*, 2013) indicate that the feature complex had enduring currency, whereas the recutting of a tree throw at Heathrow Terminal 5 (Lewis *et al.*, 2010) is invoked by the author as evidence for clearance.



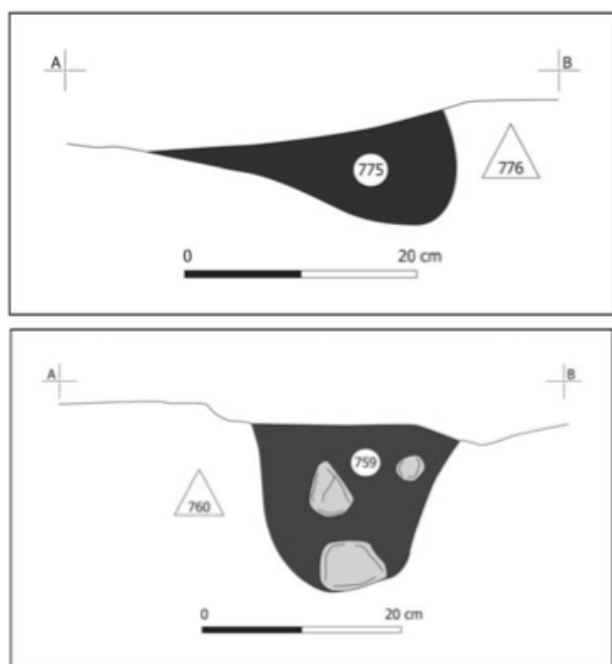


Fig. 2 – Pit 776 and posthole 760 from Brecart (reproduced with the kind permission of Northern Archaeology Consultancy).

Fig. 2 – Fosse 776 et trou de piquet 760 de Brecart (reproduit avec l'aimable autorisation de Northern Archaeology Consultancy).

### PIT FILLS AND CONTENTS

A primary difficulty in assessing biographies for pits and the role they played in Mesolithic lives is the difficulty of understanding how they were filled and which sedimentary process was active contemporary with abandonment. In many instances excavation reports lack clarity on the processes by which cultural materials became incorporated into pits, and detailed geoarchaeological assessments (such as the use of soil micromorphology and detailed consideration of bioturbation) are rare. This is unfortunate, as P. Woodman (Woodman, 1985) has demonstrated that field observations of the composition of fills of Mesolithic pits can be problematic: with soil samples from apparently homogenous fills having different origins, or supposedly different fills being very similar in character. Taking field observations at first hand, the majority of Irish pits (60.3%) have only one fill, although some are very complex and show evidence for recutting. The situation in England is similar. It is difficult to establish the reasons why, beyond ephemerality, Mesolithic pits are frequently assigned only one fill and perhaps reflects on the value of geoarchaeological assessment in determining more nuanced interpretations of negative features. The mobility of excavators between Britain and Ireland may also be invoked as a reason for degrees of similarity in the records produced.

### Lithics

The most commonly found cultural inclusions in Mesolithic pits are Mesolithic lithics. This demonstrates some

interesting patterns, although caution is advisable because lithics are often the only chronologically diagnostic material culture surviving from the Mesolithic, and because few pits are directly dated. Indeed, there is a dangerous circularity in arguing that these were common inclusions in the past. Lithics can, however, indicate aspects of the pit's biography. At both Mercer's Quarry (Hammond, 2005) and Pendell Farm (Lewis and Pine, 2008), sites in close association in Surrey, pits containing high proportions of spall alongside microliths and narrow-blade assemblages were interpreted as the disposal from knapping events. At the former, the inclusion of burnt pieces was suggested to implicate more than one disposal event. Also in Surrey, refitting of lithics from a feature at St Anne's Heath School (Lambert, 2007) tie some pieces to a single knapping episode, although the report is equivocal about the origin of the feature, and little supporting information is given (an unfortunately common problem with grey literature in England). In Ireland, some deposits seem to indicate deliberate selection of lithics which were placed in pits. At Belderrig, Co. Mayo, lithics deposited in a shallow pit are larger than other lithics on site (Warren, unpublished data), whilst at Bay Farm an unusual pit (or pits) contained hammerstones, flint debris and the only example of chert from the site (Woodman and Johnson, 1996).

Six sites in England returned pits with axes in the fill although none were definitively demonstrated to be deliberately placed deposits. Perhaps the most convincing of these is from work on the A140 Scole-Dickleburgh Road Improvement Project ((NAU, 1994) where a small pit yielded two cores, a possible microlith tip and a concentration of blades and flakes "apparently from one knapping event", as well as a small axe. As yet, the Hermitage site is the only example in Ireland to have yielded an axe from a pit (see fig. 3). Most intriguing of the pits with worked lithics included in the fill is the small shallow pit from Saltwood Tunnel, on the line of the Channel Tunnel Rail Link (HS1), from which a group of eight hollow based microliths were recovered, their uniformity of manufacture and distribution being interpreted as contemporaneous deposition, "in a bag, or hafted as a composite item" (McKinley et al., 2006, p. 7). Several of the microliths had broken tips suggestive of damage through use. It was also noted by the excavator that the pit had filled substantially by the time the lithics were deposited, although only a single fill was recorded and evidence of bioturbation may have reworked the flints. It is surely not too much of an interpretative leap to suggest that the burial of these flints represents something more than casual inclusion during natural sedimentation, as is frequently implicated as the process by which Mesolithic lithics become included in feature fills.

### Burnt deposits

While no examples from Ireland are recorded, the inclusion of burnt deposits in pits at a number of sites in England points to clearance of camp refuse. A sub-rectangular pit at Charnham Lane, Hungerford (Ford, 2002) displayed undercut sides and was filled with burnt flint and struck

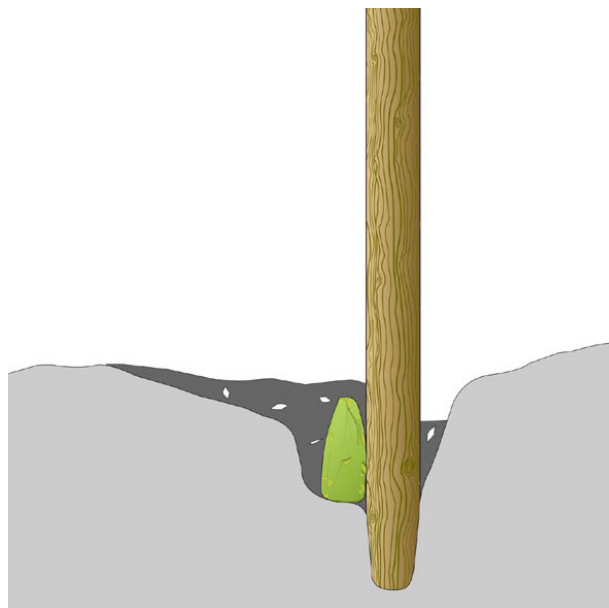
unburnt blades and flakes of Later Mesolithic type, and carbonised remains of apple and hazel. At Sonning Eye Quarry in Oxfordshire (Ford, 2004) fire reddened clay was retrieved alongside flints of Late Mesolithic or Early Neolithic type. Further burnt clay was retrieved from similar assemblages from work at Nosterfield (Dickson and Hopkinson, 2011) and, most convincingly, from the A27 Westhampnett Bypass in West Sussex (Fitzpatrick et al., 2008). A total of 1,539 Deepcar-type lithics were recovered from nine pits in two groups, although the reporting is unfortunately vague about how the lithics came to be included in the features. Other shallow pits, such as at Uffington Estate, Lincolnshire (Hall and Ford, 1991) and Lindley Moor, Huddersfield (NAA, 2001) are considered to represent hearths, or in situ burning events based on the fired appearance of the natural geology. However, as with lithic inclusions, caution in interpreting hearth-pits may be appropriate (Crombé et al., 2015).

### Mortuary practices

A small number of pits held human bones. At Hermitage, Co. Limerick, three cremation pits were dated to the Mesolithic. The most notable example included the cremated remains of an adult male, placed with a polished stone axe into a pit which was marked by a post (Collins 2009; Collins and Coyne, 2003 and 2006; here: fig. 3). At Langford, Essex cremated bone was placed within a pit of c. 1 m diameter which is argued to have been deliberately backfilled at c. 5600 cal. BC on the basis of consistent radiocarbon dates on cremated human bone and oak charcoal. Analysis of the bone demonstrated mastery of pyrotechnology, as at Hermitage, and primary deposition of the fired remains and pyre, capped by redeposited natural, suggests intentional deposition and rapid backfilling (Gilmour and Loe, 2015).

### UP-CAST

The counterpoint to pit-fills is of course the up-cast produced during their initial excavation. Apart from those instances where redeposited geological sediment is interpreted as the deliberate backfill of pits, often as part of a single episode comprising pit excavation-anthropogenic use or placement of artefacts-backfilling, the up-cast from pits is very rarely considered in either academic or commercially-derived literature. Perhaps this is due to a supposed lack of value, or the difficulty in identifying this material against the lithologically identical undisturbed geology. Only in the discussion of the burnt flint-filled pits at Terminal 5, Heathrow (Lewis et al., 2010) was up-cast briefly entertained as being significant; in this instance the low mounds produced by pit digging were speculated to have reinforced the importance of the place (see below). Perhaps the up-cast from pit digging events carried more significance than we could safely interpret from currently published sites although we would need particularly fortunately sealed deposits to test this.



**Fig. 3** – Reconstruction drawing of pit A from Hermitage including post and axe (reproduced with the kind permission of Tracy Collins, Aegis Archaeology Limited).

*Fig. 3 – Dessin de reconstitution de la fosse A de Hermitage incluant un pieu et une hache (reproduit avec l'aimable permission de Tracy Collins, Aegis Archaeology Limited).*

### CLUSTERS, ALIGNMENTS, MARKERS

Pit alignments, which are well established in later periods, are very slowly gaining recognition as a feature of Mesolithic landscapes in Britain and possibly Ireland. Three large pits aligned east-west in the car park at Stonehenge were found to exhibit post pipes of substantial pine inserts up to 0.80 m in diameter, and a further similarly aligned pit and tree-throw, also at Stonehenge (Cleal et al., 1995), may be the first evidence for monumental landscapes in Britain during the Holocene. Although focus naturally rests on the posts that once stood in these pits, and rotted in situ, valuable palaeoenvironmental analyses were performed on the pit fills (in passing, it should be noted that such analyses are rarely reported for Mesolithic pits in Britain and Ireland). Palynology and molluscan analysis established an open mixed pine and hazel woodland which was presumed to have been cleared at the time of pit-digging and following a hiatus (perhaps stabilisation) in the Later Mesolithic, the pits continued to fill during the time of the construction of the stone circle at Stonehenge, and were thus visible. The posts have been posited as similar to totem poles (ibid) or cultural markers (Allen and Gardiner, 2002) and finds like the Late Mesolithic/Early Neolithic timber with potentially anthropogenic markings from Maerdy windfarm in the Rhondda, Wales (BBC News, 2013) could point towards a landscape augmented by richly decorated wooden features.

Echoes of the longevity of Mesolithic features into later periods is evident at Warren Field, Aberdeenshire, where a Mesolithic pit alignment with a claimed astro-

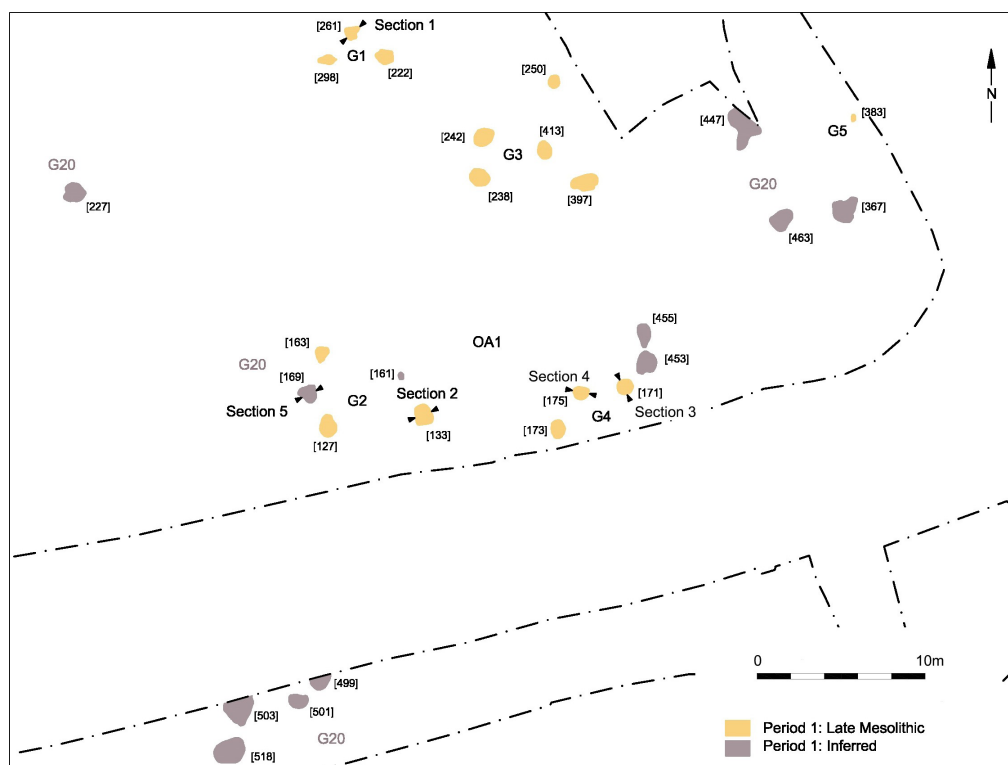
nomical function (Gaffney et al., 2013) was open in the early Neolithic during the construction of a timber hall nearby. The substantial Mesolithic pits contained distinctive minerals resulting from the exploitation of a geological outcrop some 40 km from the site (Murray et al., 2009), and their formation is claimed to reflect the relationship between celestial movements and the local montane topography. At both Warren Field and Stonehenge arguments highlighting the significance of the landscape context of pits are important observations, albeit observations steeped in a long tradition of identifying site ‘types’ and their position within a system.

Further possible examples are to be found in North Yorkshire, though neither has been securely demonstrated to be Mesolithic. Large empty pits at Cooks Quarry in the Vale of Pickering are tentatively interpreted as forming an avenue and are postulated as Mesolithic by the excavator (Powlesland, 2004) although the pits await radiocarbon dating. Later Mesolithic activity at the quarry is attested to by lithic concentrations alongside a relic stream channel in an extensively excavated landscape otherwise densely populated by later archaeology. The double pit alignment at Nosterfield, close to the magnificent Neolithic Thornborough henges, was composed of two rows about 25.50 m apart with a combined total of seventeen pits running northwest-southeast for 79 m. The pits measured between 3.02 m and 1.45 m in length and a maximum of 2.45 m in depth, and exhibited a variety of fill systems. Whilst some were dug, filled and recut, others appear to

have been left open. A single radiocarbon date from the upper fill of one of the pits ( $4675 \pm 60$  cal. BC) is clearly very Late Mesolithic and with an absence of comparanda, the alignment was considered to be Neolithic (Dickson and Hopkinson, 2011). Both examples serve as reminders of the importance of keeping potentially significant data in discursive circulation; both sites may have attracted more Mesolithic-specific resources had alignments been a recognised feature class at the time of excavation.

Occasionally, pits appear to have been marked by the erection of a post but served wider functions than simply being a post-pit. The cremation at Hermitage was discussed above, and a second example from Mullinabro, morphologically different in its linear plan, was recorded as having a central stake hole (Wren, 2006, p. 4). Similar examples may have been present at Sutton, Co. Dublin, although this may be a post-hole truncated by a later pit (Mitchell, 1956, p. 7), as at Brecart, Co. Antrim (Dunlop, 2010, p. 75). No examples from England were identified.

An emergent group of sites comprises groups of pits, reminiscent of the recognition at the turn of the millennium of the Neolithic ‘mundane’ pit digging phenomenon. Sites like Heathrow Terminal 5 and Woodbridge Road mentioned above might qualify, although others such as Falmer Stadium (Garland, 2012) and North Park Farm, Bletchingley (see Jones, 2013) seem to suggest pit groups can be differently configured, and for different reasons (both sites await full publication). At Falmer, five clusters of pits (fig. 4) were found to con-



**Fig. 4** – Plan of Mesolithic pits from Falmer Stadium (reproduced with the kind permission of Archaeology South-East, UCL Institute of Archaeology).

**Fig. 4** – Plan des fosses mésolithiques de Falmer Stadium (reproduit avec l’aimable autorisation d’Archaeology South-East, UCL, Institute of Archaeology).

tain significant flint assemblages, as well as hazelnut shell radiocarbon dated to the 7th millennium cal. BC. The pits were subround, between approximately 0.6 m and 1.3 m in diameter and depth (fig. 5), and are interpreted as filling rapidly, marking the result of repeated visits to a woodland clearing prior to hunting (Garland 2012). Mount Sandel might, in some circumstances, be recognised as a site of grouped pits but has instead been formulated as structural evidence.

## INTERPRETATIONS

The evidence therefore suggests that pits were an important facet of life in the Mesolithic period in Britain and Ireland, and that there are many similarities between the two regions. But the physical remains of these are ephemeral, and pits have not always been adequately assessed in excavation or archival work, and it is possible that more detailed consideration of their formation would provide sharper indications of use.

The simplest interpretative group, based on contents, is mortuary. Hermitage and Langford provide the clearest examples of these, and it is important to note that in both cases, prior to obtaining radiocarbon dates the excavators expected the cremations to be Bronze Age: it is very likely that a systematic approach to the dating of cremated bone with no clear artefactual associations from pits would reveal further Mesolithic evidence. Other sites have a possible association with funerary processes. Pit B at Kilham Long Barrow, East Yorkshire, found beneath the Neolithic building phase is the only other known potentially Mesolithic feature with associated bone. Excavated by T. Manby (Manby, 1976), the bone remains undated (Meiklejohn et al., 2011) and C. Conneller (Conneller, 2006) has pointed to co-mingling of Mesolithic and Neolithic archaeology in the buried soil as reason to reserve judgement on the date. The association with monumental architecture however, or at least the formal marking of space, is tantalising.

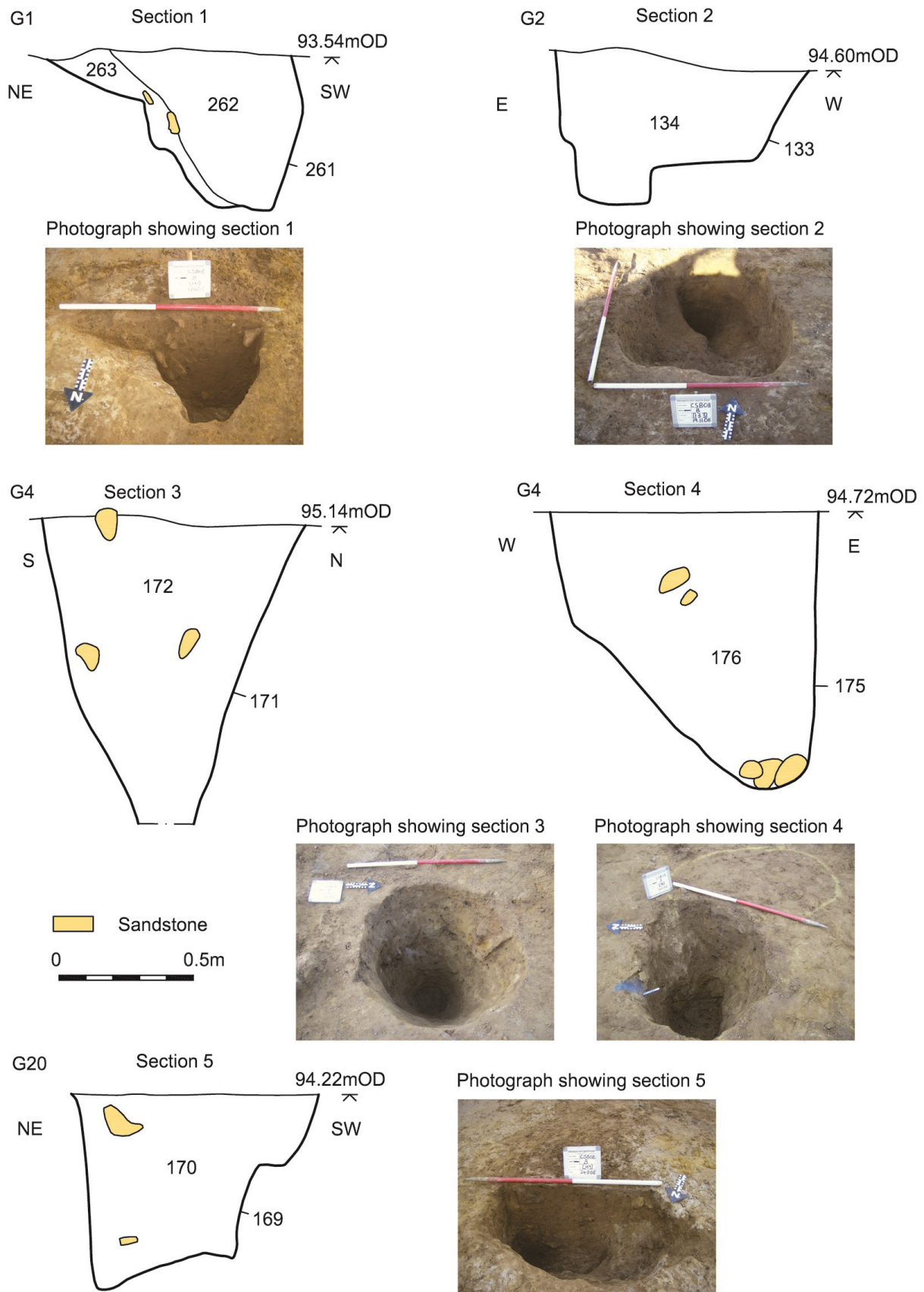
The link between Mesolithic pits and later monuments is continued by the Heathrow pit group around which the Neolithic Stanwell cursus monument developed along a river terrace (Lewis et al., 2010), although the extent to which continuity is represented is probably unknowable due to a time lag of up to 2,000 years. There are echoes here too of the Stonehenge landscape (Cleal et al., 1995) where substantial post-pits have been interpreted as having held similarly substantial pine posts between the mid-9th and late 8th millennia cal. BC, the ‘cultural markers’ of M. Allen and J. Gardiner (Allen and Gardiner, 2002). There is a temptation to relate incidental archaeology dated millennia apart, in the same landscape – recent excavations of Mesolithic remains at Blick Mead at Amesbury in the wider Stonehenge landscape is testament to this (Jacques and Phillips, 2014). However, it would be careless to completely disregard the landscape context and the potential longevity of special associations with specific places.

Pits discovered on river terraces at Woodbridge Road (Bishop, 2008) and tree throws at Bath Spa (Davenport et al., 2007) were interpreted as providing access to raw material, the products of which were found concentrated at each site. Both sites reinforce the difficulties in establishing an anthropogenic origin for ephemeral features, yet both demonstrate unequivocal human action with on-site primary knapping of local material. Furthermore, both sites illustrate the pit/tree-throw as more than a monolithic archaeological entity, where the feature is created naturally or deliberately, provides access to deposits, supplies a focus for activity, and acts as an archaeological capture point. Indeed, the boundary between pits and tree throws is sometimes difficult to identify: some tree throws were marked by pits, for example at Mount Sandel (Woodman, 1985, p. 30) and possibly Bay Farm (Woodman and Johnson, 1996, p. 157), and some seem to have contained deliberate, or at least remarkable, deposits (Mossop, 2009, p. 15). Again at Mount Sandel, a deposit of elongated pebbles was found in the fill of a tree-throw while two examples of Moynagh points, exceptionally rare ground stone points, both came from tree-throws (at Belderrig and Mullinabro). In other periods and regions connections have already been made between patterns of deposition in pits and tree-throws (Anderson-Whymark, 2012; see also Evans et al., 1999 for discussions of tree-throws in prehistory).

A wide variety of other interpretations, some noted above, have been based primarily on the contents of the fill. Thus pits are considered to have played a role in storage, or in depositing settlement refuse. Over the past decade, there has been a growing acceptance of ritual associations with Mesolithic deposition (Blinkhorn and Little, forthcoming; see also Chatterton, 2006). Again, such arguments are hampered by precedence, but especially by traditional research questions prioritising economic aspects of hunter-gatherer life. While Star Carr is possibly the best known example of a site argued to evidence Mesolithic ritual deposition, the only published ‘pit’ has been interpreted as a ‘house’ (Conneller et al., 2012). Overall, the majority of Mesolithic sites in Ireland and Britain comprise lithic scatters, often disturbed thus reinforcing familiar interpretations.

The oldest classification of Mesolithic pits in England has been the ‘pit-dwelling’ like Selveston (Clark, 1934), Farnham (Clark and Rankine, 1939) and Abinger (Leakey, 1951). These interpretations were received from continental Europe (ultimately from Köln-Lindenthal) as convenient means to explain concentrations of lithics in cut features and to provide trans-European associations. The critiques provided by R. R. Newell (Newell, 1981) and P. Woodman (Woodman, 1985) served as a death knell for such interpretations, until recently at least and without the associated political baggage. As interpretations of these features were ‘down-graded’ to tree-throws, the value of the negative feature as an interpretative tool seems to have also been diminished; contents alone delivered ‘data’. Considering the use of natural features in the Irish and British Mesolithic, the wholesale rejection of the ‘pit-dwelling’ demands reconsideration.





**Fig. 5** – Sections and photographs of Mesolithic pits from Falmer Stadium (reproduced with the kind permission of Archaeology South-East, UCL Institute of Archaeology).

**Fig. 5** – Coupes et photographies des fosses mésolithiques du site de Falmer Stadium (reproduit avec l'aimable autorisation d'Archaeology South-East, UCL, Institute of Archaeology).

## DISCUSSION A FUTURE FOR MESOLITHIC PITS

A key problem with Mesolithic pits in Britain and Ireland, specifically in a developer-led context, is the early identification of features as being Mesolithic. Time and money pressures on these projects at all stages (pre-determination, post-determination and mitigation) and the plural multi-period research questions driving the archaeology often side-line the more ‘difficult’/‘ephemeral’ deposits which most often rely on ‘diagnostic’ artefacts to date the feature. Much of the time, Mesolithic lithics are regarded as ‘residual’ or a background scatter reworked into later features, and are infrequently diagnostic. Furthermore, until identified as needing special attention, one feature will be dealt with the same as the next, most commonly half-sectioned without 3D recording of artefacts and depending on the prowess of the excavator, variable attention to the biography of the pit. Unfortunately, many pits are not recognised as being Mesolithic until after their excavation. The quality of data that is being produced is therefore understandably variable. The sites mentioned in this paper are highlighted as a product of the quality of recognition in the field (usually), or quality or uniqueness of the deposits uncovered. Few academic projects have focused on understanding Mesolithic features, although Bayesian modelling of dates from Mount Sandel stands out as highlighting the potential of feature-based analyses in developing interpretations (Bayliss and Woodman, 2009).

Minimally, it would be helpful to see increased attention paid to the recording of pits in the field. This should include 3D recording of artefacts, increased application of refitting and the application of geoarchaeological techniques to better understand the processes and temporalities of pit fills. For example, R. Loveday and M. Beamish argue many Neolithic pits are the remains of turf ovens, citing micromorphological evidence that some ‘midden’ material within pits is decayed turf (Loveday and Beamish, 2012).

More systematic approaches to dating pits would be helpful, and would likely reveal more Mesolithic pits. Standardised terminology and excavation procedures would facilitate comparison, but it is difficult to see how this might be achieved. Given the indications that landscape settings are important for at least some pits it would be important to examine this aspect in more detail.

It is apparent, from the commercially derived reports at least, that there is a historical reticence to assign a Mesolithic date to negative features. Unlike later periods for which diagnostic ceramics have traditionally been used to date features, the Mesolithic in Britain and Ireland offers little to date features confidently unless within a secure (and dated) geoarchaeological context. The vertical mobility of lithics on some geologies (for example at Hengistbury Head; Barton, 1992), and dif-

ficulties in prospecting for primary context Mesolithic sites have equally compounded the lack of precedence for associating negative features with Mesolithic activity. Overcoming this reticence is crucial if resources are to be directed towards understanding the Mesolithic in a commercial environment.

Finally, it is important to note that experimental approaches would be of benefit. Given the digging technologies available, what length of time would it take to excavate some of the pits found on Mesolithic sites? How plausible are some of the claims for storage functions?

## CONCLUSION

Mesolithic pits are an important and frequent feature of the period in both Britain and Ireland. In both areas there are some problems with the recording of these features in the field, and this provides limits to interpretation. Mesolithic pits in Ireland and Britain may not be the direct comparanda of those in the Neolithic (though this certainly deserves more thorough investigation), and nor should they be regarded as a single phenomenon. It is difficult to compare the records of two periods across such an important transition when so little research has been conducted on the earlier material. However, minimally, we can argue that pits were varied in kind and fulfilled varied functions. Many of these were assumedly fairly routine in character: the deposition of waste, or storage of resources. But at times we can identify pits caught up in what must have been more ritualised, or dramatic moments. We see this strikingly in the use of pits as places to deposit cremated bone, sometimes with grave goods and sometimes with markers, and perhaps less strikingly in the formal deposition of waste. Pit alignments seem to have made reference to important features of the surrounding landscape, and in some cases appear to have been built in places that were significant many thousands of years later. For many pits, however, we are unable to identify their role in Mesolithic life. These are likely to have been varied: the temporal range encompasses thousands of years, and many different human groups separated at least by space and lithic technology. Greater analytical attention to pits would perhaps provide new perspectives on those different groups of hunter-gatherers.

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